What is claimed is:

1. A system for conducting a working fluid and for receiving input heat from a heat source and for providing work out, the system comprising,

a capillary device for receiving the input heat from the heat source and phase changing and separating the working fluid from a liquid state to the first vapor state at a first vapor pressure,

a superheater for receiving the input heat and heating the working fluid in the first vapor state to a second vapor state, the working fluid in the first vapor state is heated into the second vapor state at a second vapor pressure at a superheated temperature in staggered amounts,

a turbine for converting thermal energy of the working fluid in the second vapor state into mechanical energy as the work out while converting the working fluid from the second vapor state to a third vapor state at the third vapor pressure, and

a condenser for phase changing the working fluid in the third vapor state into a liquid state while rejecting waste heat.

2. The system of claim 1 wherein,

the first vapor state is a saturated vapor state,

the second vapor state is a superheated vapor state, and

the third vapor state is a saturated vapor state,

3. The system of claim 1 wherein,

the capillary device is a loop heat pipe.

4. The system of claim 1 wherein,

the capillary device is a capillary pumped loop.

5. The system of claim 1 wherein,

the system is a power generator, and

the turbine converts energy by extracting thermal energy from the working fluid to produce output power as work out.

6. The system of claim 1 wherein,

the first vapor state has a first vapor pressure and a first temperature,

the second vapor state has a second vapor pressure and a second temperature,

the third vapor state has a third vapor pressure at a third temperature,

the first temperature is lower than the second temperature,

the second temperature is higher than the third temperature, and

the first vapor pressure is higher than the third vapor pressure.

7. The system of claim 1, wherein,

heat is radiated from the condenser.

8. The system of claim 1 wherein the superheater comprises, stages respective comprising:

continuous control valves for receiving the working fluid from the capillary device;

heating chambers for superheating the staggered amounts of the working fluid; and

control valves for ejecting the staggered amounts of the working fluid, wherein each of the control valves are activated at staggered times for ejected the staggered amounts of the working fluid at staggered times in pulses.

9. The system of claim 1 wherein the superheater comprises, stages respective comprising: continuous control valves for receiving the working fluid from the capillary device; heating chambers for superheating the staggered amounts of the working fluid; and control valves for ejecting the staggered amounts of the working fluid, wherein each of the control valves are activated at staggered times for ejected the staggered amounts of the working fluid at staggered times in pulses, and

a controller for controlling the control valves for providing the ejection of the staggered amounts of the working fluid at staggered times in pulse, the controller for controlling the control valve when temperatures of the working fluid in the heating changer are at predetermined values.

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10. The system of claim 1 further comprising,

a vapor accumulator disposed between the capillary device and the superheater for continuously accumulating the working fluid from the capillary device and for dispensing the working fluid in incremental amounts respectively into the stages of the superheater for dampening pressure oscillations entering superheater.

11. The system of claim 1 further comprising,

a liquid pump for pressurizing the working fluid in the liquid state, and

a preheater for heating the working fluid in the liquid state.

12. The system of claim 1 wherein,

the superheater heat source and the capillary heat source are the same heat source.

13. The system of claim 1 further comprising,

a liquid pump for pressurizing the working fluid in the liquid state into a pressurized liquid state, the liquid pump being coupled to the condenser, and

a preheater for heating the working fluid in the pressurized liquid state into a heated pressurized liquid state, the preheater being coupled to the capillary device.

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14. The system of claim 13 wherein,

the superheater heat source and the capillary heat source and the preheater heat source are the same heat source.

15. The system of claim 1 wherein,

the superheater heat source and the capillary heat source and the preheater heat source are all separate heat sources where the heat source for the superheater is at a temperature higher than temperatures of the input heat from the capillary heat source and the preheater heat source.

16. The generator of claim 1 wherein,

the superheater heat source is selected from the group consisting of a radioisotope heat source, an active nuclear heat source, a solar heat source, and a waste heat source.

17. The generator of claim 1 wherein,

the capillary heat source is solar energy.

18. The generator of claim 1 wherein,

the capillary heat source and preheater heat source receive heat dissipated from spacecraft electronics.

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19. The generator of claim 1 wherein,

the system is for powering a spacecraft,

the superheater heat source and the capillary heat source are selected from the group consisting of a radioisotope power system, or spacecraft electronics or solar radiation, and

the condenser radiates heat out for rejection of waste heat into outer space.

20. The generator of claim 1 wherein,

the heat input to the superheater comprises a thermal energy storage material.

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